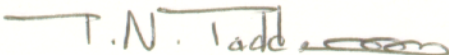



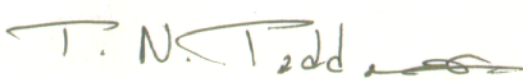


**LANSCCE-3 SOURCE CONTROL POLICY
and
HAZARD CONTROL PLAN**

ID number:	LANSCCE-3 HCP-04.0
initial risk:	Medium
residual risk:	Low
work permits required:	none

Author:	Signature	Date
T.N. Taddeucci LANSCCE-3 Source Custodian		10/24/00
Reviewed By:		
Bruce Takala LANSCCE-3 Operations Officer		10-25-00
ESH-1		10-24-00
Authorized By:		
Steve Wender LANSCCE-3 Group Leader		10/26/00
Annual review:		
T. Taddeucci		8/14/02

LANSCCE-3 SOURCE CONTROL POLICY and HAZARD CONTROL PLAN

ID number:	LANSCCE-3 HCP-04.0
initial risk:	Medium
residual risk:	Low
work permits required:	none

[[Cover Sheet](#) | [no frames](#)]

DESCRIPTION OF WORK

LANSCCE-3 maintains an inventory of radioactive sealed sources that are available to authorized personnel for use in research activities. This document describes LANSCCE-3 policies and procedures for the use, maintenance, and storage of these sources.

HAZARDS

The primary hazard associated with radioactive sealed sources is the ionizing radiation that they emit. LANSCCE-3 radioactive sources include alpha, beta, gamma, x-ray, and neutron emitters. Chemical hazards related to the elemental properties of the radioactive isotopes may also exist, although the quantities of hazardous material are typically very small.

INITIAL RISK

There is a **MEDIUM** initial risk associated with the use of LANSCCE-3 radioactive sealed sources. That is, without the controls and training requirements mandated in this document, it is **LIKELY** that a source may be misplaced, misused, or damaged in a way that results in unintended exposure to personnel or release of radioactive material to the environment resulting in moderate health consequences or property damage (contamination).

INSTITUTIONAL REQUIREMENTS

Institutional requirements and guidance covering the use of radioactive sealed sources are described in LANL documents:

<u>LIR-402-716-01.1</u>	"Radioactive Accountability/Control"	Sealed	Source
<u>LIG-402-716-01.0</u>	"Radioactive Accountability/Control"	Sealed	Source

Facility requirements are described in the next section.

CONTROLS - LANSCE-3 POLICIES AND PROCEDURES

1. AUTHORIZATION AND ACCESS

Authorization to use LANSCE-3 sources must be obtained from the LANSCE-3 Group Leader and the LANSCE-3 Source Custodian. Authorization is documented in the LANSCE-3 Authorization and Assignments memo and in the log sheet for this HCP (Appendix B). Users from groups other than LANSCE-3 must also be authorized by their respective group leaders or line managers. Visitors are authorized through the experiment review and authorization process.

Only authorized users are permitted to check out and use LANSCE-3 sources. Authorized users must not loan sources or provide access to non-authorized users.

The LANSCE-3 Source Custodian will maintain a list of authorized users and will provide keys or lock combinations to authorized users.

2. STORAGE AND INVENTORY

The LANSCE-3 Source Custodian will maintain physically secure storage locations for LANSCE-3 sources and will minimize the number of locations. Sources will be segregated from other radioactive material.

The LANSCE-3 Source Custodian will maintain a source inventory and arrange for source leak-tests at appropriate intervals, as defined in LIR-402-716-01.1. Sources that are leaking or damaged will be taken out of service.

3. CHECKOUT PROCEDURES

All sources must be logged out and logged in. The following information is required:

- Name,
- Source ID,
- where the source will be used,
- Date out,
- Date in.

The Source Custodian will provide and maintain log sheets. When checking out source sets, count and record the number of sources in the set when you check it out and when you check it in.

4. POSTING

The location where the source is in use must be posted. The only exception to this is when the source is in use for periods of eight hours or less and is under continuous observation and control. If the potential exists for creating a radiological area, posting must be done by ESH-1. Appropriate signs may be obtained from the ESH-1 field office.

When possible, the source itself should be clearly marked. Make sure others working in the area are aware of the presence of the source and know what it looks like. When a source is unattended or not in use it must be kept in a locked cabinet or room, with appropriate posting.

5. USAGE RESTRICTIONS

Sources **MUST NOT** be exposed to primary (proton) or secondary (neutron) LANSCE beams. Applications that require a source to be placed in a beam must first undergo an experimental safety review.

Sources **MUST NOT** be subjected to extreme heat or extreme cold, be placed in a vacuum, or be exposed to crushing. Any application of thermal, electrical, or mechanical stress that might compromise the source encapsulation must first be subjected to an experimental safety review.

If you suspect that a source is leaking or damaged, notify ESH-1 and the Source custodian. (See EMERGENCY PROCEDURES). Do not move the source until it has been checked by an RCT.

Because of special handling requirements or other unusual circumstances, some sources may require their own specific Hazard Control Plans. A list of these special sources and Hazard Control Plans will be maintained as an Appendix to this document.

6. NEW SOURCES

The Source Custodian must be notified of the purchase of new sources or the arrival of sources on loan. New sources must be leak tested by ESH-1 upon arrival.

KNOWLEDGE, SKILLS, AND ABILITIES

Authorized users of LANSCE-3 radioactive sealed sources must have currently valid Radiation Worker Training (level I or II).

Authorized users must complete the LANL self-study course #15907 [Sealed Source Safety](#).

Users must also have currently valid Site-Specific Training for the area where the sources will be used.

WASTES

No wastes are generated in the routine use and storage of LANSCE-3 radioactive sealed sources.

RESIDUAL RISK

Provided that the procedures and policies described in this document are followed, there is a **LOW** residual risk associated with the use of LANSCE-3 radioactive sealed sources. That is, there is only a **SLIGHT** chance of unintended exposure to personnel or of damage to a source that results in the release of radioactive material.

EMERGENCY PROCEDURES

If a radioactive source is damaged, notify ESH-1 (667-7069) immediately and request monitoring for a suspected leak of radioactive material. If possible, remain in the vicinity of the source to minimize the spread of contamination and warn away other personnel -- however, your physical safety ALWAYS overrides concerns about contamination. Do not place yourself in danger!

If monitoring reveals leakage or radioactive contamination, follow the directions of the RCT.

CHANGE CONTROL

The LANSCE-3 source custodian will review this document for currency at least annually. If no changes are necessary, the Source Custodian will initial and date the cover sheet.

Informational (non-procedural) appendices may be added, deleted, or amended by the Source Custodian at any time without additional review.

A master copy of this document will be maintained in the LANSCE-3 Group Office. Copies will be made available electronically (<http://wnr.lanl.gov>) and in the source storage locations.

[Appendix A:](#) Sources with specific Hazard Control Plans.

[Appendix B:](#) Authorized User List.

[Appendix C:](#) Check-out Log sheet.

[[LANL](#) | [LANSCE](#) | [LANSCE-3](#) | [WNR](#) | [LANSCE-6](#) | [Help!](#)]

LOS ALAMOS NATIONAL LABORATORY

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